

Amendment and Response

Applicant: Ralf Brederlow et al.

Serial No.: 10/562,458

Filed: June 29, 2006

Docket No.: 1432.128,101/P31912

Title: ELECTRONIC COMPONENT WITH ID TAGS

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed May 14, 2009. Claims 1-11 were previously canceled. Claims 12-31 were rejected. With this Response, claim 22 has been amended to correct minor typographical errors. Claims 12-31 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 102

The Office Action rejects Claims 12-14 and 17 under 35 U.S.C. 102(b) as being anticipated by **Marget *et al.* (US 4,712,153)**. Applicant respectfully disagrees.

Claim 12 is an electronic component operable with an AC voltage. The electric component includes at least one input, at least one output, and a pair of ***functionally identical electronic sub-components***. The functionally identical electronic sub-components ***are connected in parallel***. The at least one input of the electronic component is connected to a respective input of the two functionally identical electronic sub-components. The at least one output of the electronic component is connected to a respective output of the two functionally identical electronic sub-components. The electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage. This is not taught or suggested in the art of record.

The subject-matter of independent claim 12 relates to an electronic component that can be operated by means of an alternating (AC) voltage. Electronic sub-components with an identical function to the electronic component are alternately driven by the first half-wave of the AC voltage and the second half-wave of the AC voltage, respectively.

The Marget reference cited by the Examiner describes a triggering device and a power circuit comprising an amplifier circuit connected between minimum and maximum potential rails. Marget further describes an embodiment wherein the power circuit is connected with opposite polarities. FIG. 2 of Marget describes a set up to be used to control the triggering of an

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external load circuit, wherein the external load circuit uses an AC voltage source, whereas the amplifier circuit uses DC voltage sources. Marget fails to teach or suggest all the elements of independent Claim 12.

In *c5*, 1 49-60, Marget describes how two elementary devices, 1+ and 1—, are adapted to pass (or block) positive and negative voltages. Upon inspection of FIG. 2 (and using FIG. 1 as a guide), the output terminals S1 and S2 are connected across elementary devices 3+ and 3—, and does not indicate a connection in parallel between identical or functionally similar sub-components. The output S1 of 3+ is connected across to output S2 of 3—. Conversely, S2 of 3+ is connected to S1 of 3—. The two pairs of outputs of the rectangles 3+ and 3— are not connected between the same terminals to indicate a parallel connection.

The present invention teaches a parallel connection between electronic sub-components. This is explained in paragraph [0060], and illustrated in FIG. 1 and FIG. 6 of the published Specification.

For reference, paragraph [0060] states:

[0060] The two functionally identical electronic sub-components of a pair are used in parallel in order to achieve satisfactory operation of the electronic component during the two half-waves of an AC voltage. The two function blocks share the input signals, and the corresponding outputs of the two electronic sub-components are connected together after the switches e.g. transistors.

For example, in FIG. 1 the inputs 103 and 114 are part of an input. The two outputs 106 and 117 together form the output 125 (paragraph [0056]).

This difference is identified in Claim 12 as:

“a pair of functionally identical electronic sub-components, wherein the functionally identical electronic sub-components are connected in parallel” and

“wherein the at least one output of the electronic component is connected to a respective output of the two functionally identical electronic sub-components”

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Applicants' submit there are additional grounds that Marget does not teach the present invention.

The Office Action (O.A.) cites *c2, l 36-44*, which states:

When the intention is to control the triggering of an external load circuit comprising an alternating current voltage source, the invention provides that the aforementioned triggering device comprises two power circuits connected in parallel with opposite polarities so as to each generate, where necessary, a rectifier current respectively corresponding to the positive or negative half-waves associated with said source.

Additionally, in the description at *c 5, l 49-52*, Marget identifies passing positive half-cycles and negative half-cycles in the improved device of FIG. 2.

From the first citation, Marget describes the improved device of FIG. 2 to control the triggering of an external load circuit comprising an AC voltage source; however, this passage does not identify the operation of the circuit of FIG. 2 itself with an AC voltage within the circuit of FIG. 2. To the contrary, the circuit of FIG. 2 has a D flipflop circuit as an input, which provides either a constant logic high potential (e.g. + 5V) or a constant logic low potential (e.g. 0 V or – 5 V) at the output Q of the D flipflop (and the inverse (constant) logic potential at the inverse output /Q. A possible switching between the logic states of the D flipflop depends on the potential provided at the D terminal and the clock terminal (h). Thus, since the logic potential at the output Q of the D flipflop represents the logic potential at the D terminal at a predetermined state of the clock signal (e.g. in an edge triggered D flipflop at the occurrence of a falling edge or a rising edge of the clock signal), it is evident that the logic potential at the output Q cannot be an AC signal, but a switched DC signal.

Thus, the main amplifier circuit of FIG. 2 of Marget operates under a DC voltage source, and the two elementary devices 1+ and 1— adapted to pass positive and negative half-cycles refer to the switched DC signals.

Thus, Marget fails to disclose the operation of the amplifier circuit using AC voltage.

This feature, however, is cited in Claim 12 at:

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“an electronic component operable with an AC voltage” and

“wherein the electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage”.

Hence, Applicants’ submit that Marget does not anticipate Claim 12 and the claims dependent therefrom. For at least the same reasons, it is submitted that Claims 13, 14 and 17 which depend from Claim 12 are thus novel for at least the same reasons. Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 102(b) rejection to the claims, and requests allowance of these claims.

Claim Rejections under 35 U.S.C. § 103

The Office Action rejects **Claims 15, 18-20, 22-26, and 28-30** under 35 U.S.C. 103(a) as being obvious in view of the combination of **Marget *et al.* (US 4,712,153)** in view of **Baude *et al.* (US PG Pub 2004/0119504 A1)**.

Claims 15, and 18-20 depend from independent Claim 12. Applicants’ respectfully direct the Examiner to the 102(b) rejection above where Applicants’ identify the differences between the elements of Claim 12 and Marget.

With respect to **Claim 12**, it is to be noted that Marget is not a reference a skilled person would consult since this reference only deals with circuits being operated in a DC domain and therefore teaches a skilled person away from the subject-matter of claim 12, which provides an easy and cost efficient way of enabling a circuit to be operable also in the AC domain and in this context an improved cost-to-area ratio.

Furthermore, Baude fails to cure the above-mentioned deficiencies of Marget. In this context, it is also referred to the Applicants' submission of June 29, 2006.

Furthermore, it is to be noted that it would be inconceivable to combine the two references without identifying the elements claimed by the Applicants.

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If one integrated the Baude reference into the power circuit and trigger device of Marget, this would not lead to the electronic component of Claim 12. A plausible outcome of such a combination is Baude's AC source providing an input to either the input connector, C or D, or the supply V+ of the circuit devices taught in Marget. However, neither of these outcomes teach or suggest all of the elements of Claim 12. Therefore, the subject-matter of Claim 12 is not obvious over Marget, even in view of Baude.

For at least the same reasons, it is submitted that Claims 13 to 31 are thus non-obvious over Marget, even in view of Baude.

Regarding **Claim 22**, the Office Action states that the first and second sub-components of Marget (1+ and 1— of FIG. 2) are connected in parallel. The Examiner is respectfully directed again to the arguments presented by the Applicants' regarding the same issue with reference to independent Claim 12 in the 102(b) rejection section.

This patentable difference is identified in Claim 22 as:

a second sub-component with an input and an output, wherein the first and the second sub-component are connected in parallel.

The Office Action also states that Marget discloses:

an AC signal received by the inputs of the first and second sub-components...; a means for providing an output from only first half-wave during the first half-wave; or a means for providing an output for providing an output from only the second sub-component during the second half-wave.

The Examiner is directed to the section above with reference to Claim 12, wherein the Applicants' state that Marget does not teach an electronic component operable with an AC voltage.

The Office Action then looks to Baude to teach an ID tag with an electric component to communicate with a read device. However, it is not obvious to combine the references as suggested in the Office Action to "enable the arrangement to wirelessly output data to the reader unit". Marget does not teach connecting a first and second sub-component in parallel.

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Additionally, this reference document does not teach how an AC voltage source would be connected to the first and second sub-components to enable the functionality described in Claim 22.

Applicants' submit that a plausible outcome of such a combination is Baude's AC source providing an input to either the input connector, C or D, or the supply V+ of Marget. However, neither of these outcomes teach or suggest all of the elements of the claims. Hence the Applicants' submit that Claim 22 and the claims that depend therefrom are not obvious in view of any combination of Marget and Baude.

Regarding Claims 23-26 and 28-30, since Marget does not teach the limitations of independent Claim 22, from which Claims 23-26 and 28-30 depend therefrom, and there is no motivation to combine the referenced documents to arrive at the invention claimed in Claim 22, Applicants' state that Claims 23-26 and 28-30 are also not obvious in view of any combination of Marget and Baude.

The Office Action rejects Claims 16 and 27 under 103(a) as being unpatentable over Marget in view of Baude, and in further view of **Seal (US 6,693,511 B1)**.

Seal discloses a pair of diodes, acting as a symmetrical diode limiter, to stop the voltage overload from a stronger input level of a signal from a transponder. Seal, however, does not teach other limitations associated with the dependent Claims 16 and 27.

As the combination of Marget and Baude fails to teach the limitations of Claim 12 and 22 as described in the paragraphs above, and as Claim 16 and 27 inherit the limitations of Claims 12 and 22 respectively, the Claims 16 and 27 are not obvious in view of any combination of Marget, Baude and Seal.

Finally, the Office Action rejects **Claims 21 and 31** under 103(a) as being unpatentable over Marget in view of Baude and in further view of **Bayron (US 5,769,051)**.

Bayron discloses an encoder configured for time-encoding. Bayron however, does not teach other limitations associated with the dependent Claims 21 and 31.

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Claim 21 and Claim 31 are dependent on independent Claims 12 and 22 respectively, and as stated above, the combination of Marget and Baude fails to teach the limitations of Claim 12 and 27. Applicants' state that Claim 21 and 31 cannot be obvious in view of any combination of Marget, Baude and Bayron. Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection to the claims, and requests allowance of these claims.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 12-31 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 12-31 are respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Paul P. Kempf at Telephone No. (612) 767-2502, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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